

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO**

SECURITIES AND EXCHANGE
COMMISSION,

Plaintiff-Appellee,

v.

No. CIV 98-860 BB

SOLV-EX CORPORATION,

Defendant,

and

JOHN S. RENDALL, and
HERBERT M. CAMPBELL,

Defendants-Appellants.

**COURT'S AMENDED FINDINGS OF FACT
AND CONCLUSIONS OF LAW**

THIS MATTER came on for a trial to the Court without a jury on December 20, 21, 22, and 23, 1999, and February 24, 25, 28, and 29, 2000, and all evidence having been presented, having considered the parties' proposed findings and conclusions, and having reviewed the relevant law, the Court now files its amended findings of fact and conclusions of law:

Findings of Fact

History and Background of the Defendants

1. Solv-Ex, a New Mexico corporation, was formed in 1980 to engage in research and development of improving, as well as developing, technology to process and recover bitumen (heavy, low specific gravity crude oil) from oil sands. Ex. 863, pp. 1, 42. Solv-Ex publicly raised several million dollars through an initial public offering and private offerings to engage in such research and development activities.
2. John Rendall was the principal founder of Solv-Ex. Since its inception, Mr. Rendall has been Solv-Ex's Chairman, CEO, and largest individual shareholder. As Solv-Ex's Chairman and CEO, Mr. Rendall has been involved in all significant matters involving the Company.
3. Prior to incorporating Solv-Ex, Mr. Rendall's professional career for the period 1959 through 1979 involved designing, commissioning, operating and managing more than ten chemical, petrochemical and industrial plants in England. Mr. Rendall joint-ventured a company he started with Rio Tinto Zinc ("RTZ") to market his extractive processes, including technology to make oil from oil sands. The Athabasca sand in the northern region of Alberta, Canada, contains bitumen. In connection with the RTZ joint venture, Mr. Rendall established a process that extracted oil from the Athabasca tar sands and assisted in the construction of a pilot plant to test that process located near Fort McMurray, Alberta, Canada, in 1976. The process involved the use of solvents in extracting oil from tar sands. In 1979, Mr. Rendall discovered that a

commonly available piece of equipment, known as a logwasher, had the capacity to separate oil from the crushed rocks, sand, water and fine clay residue and he patented that process.

4. In the 1980's, Solv-Ex built a pilot plant and laboratory in Albuquerque, New Mexico to further develop, test and improve upon the process for extracting oil from bitumen. At the time, the process was a solvent assisted hot water process intended to provide high bitumen recovery rates for a wide range of ore grades, while producing waste tailings which were more environmentally acceptable.
5. In 1988, Solv-Ex acquired 100% of the working interest in the Bitumount lease in Alberta, Canada, known as "Lease 5" which covered 5,874 acres. On January 6, 1989, Drs. George S. Pemberton and Michael S. Ranger, Professors of Geology at the University of Alberta, issued a report entitled "Geology of the Solv-Ex Corporation Athabasca Oil Sands Lease Including Bitumen and Titanium Reserve," which estimated reserves at 1.127 billion barrels of bitumen.
6. In May 1992, Herbert Campbell joined Solv-Ex as senior vice-president and general counsel. Prior to joining Solv-Ex, Mr. Campbell had worked in various management positions for mining companies, including the raising of venture capital. Since NASDAQ had threatened to suspend the listing for Solv-Ex, one of his first duties was to satisfy the demands of that stock exchange. His other duties included preparation of a business plan to assist in raising working capital for Solv-Ex, negotiating and preparing an agreement with the Alberta Oil Sands Technical

Research Authority to fund pilot plant testing of bitumen tailings, and engaging in efforts to raise capital to build a minerals processing plant. Later, Mr. Campbell's duties covered negotiating and preparing the acquisition of another oil sands lease in the Athabasca region, negotiating and preparing agreements with outside consultants who assisted Solv-Ex in the evaluation and development of its processes, and raising capital to build oil extraction and minerals production facilities. Mr. Campbell also assumed primary responsibility for drafting press releases and reviewing public statements about those projects. He also had those statements disseminated to the business community through the Business Wire. He also drafted portions of the Company's periodic reports between 1995-1997 and handled shareholder relations as well as performed the duties of Corporate Secretary and General Counsel.

7. There are three generally accepted steps in the evolution of taking an idea from the drawing board to producing a product or improving upon a process to achieve commercial production. First, the initial discovery, testing and development of the process or product is done under controlled laboratory conditions or "bench scale" testing. Second, the product or process should be tested and proven in an intermediate step, usually, a pilot plant or prototype model, that is larger and more elaborate than the laboratory, but not fully up to scale of a commercial application. Third, the process or product must be proven in a commercial plant. The likelihood of a financially viable project cannot be reliably predicted until the process reaches this third stage. Solv-Ex operated its bitumen extraction technology only at the

laboratory and pilot plant scale from February 1995 through December 1996. The electrolytic cell and TiO₂ products never proved successful beyond the scale or bench level. From 1995 to 1997, however, Solv-Ex press releases, shareholder letters, and SEC filings created the impression each of these processes was moving forward with great success.

Bitumen Production

8. In a conference call held on May 18, 1995, Mr. Rendall indicated that a marketing contract for the oil is at hand and should be announced before “we get into financing.” Ex. 769, pp. 6, 8.
9. In May 1995, Mr. Rendall also signed a glowingly optimistic letter to shareholders indicating Lease 5 was “estimated to contain one billion barrels of oil” and “the project to produce synthetic minerals, including alumina, from the Suncor tailings ponds, could be in production by the end of the year” Rendall also represented, “we have nearly completed our electrolytic test cell for production of aluminum metal and expect to have it operational in the near future.” Ex. 766. Since the scale level cell had not even been tested, much less the prototype, it was highly optimistic to postulate it could be operational “in the near future.”
10. In June 1995, Solv-Ex signed a letter of intent with Gibson Petroleum Company, Ltd. (“Gibson”) to enter into a marketing agreement whereby Gibson would market a visbroken bitumen product to be produced by Solv-Ex at a proposed plant to be built at Lease 5. Ex. 107. Visbreaking is a thermal process utilized to break down heavy

molecules into lighter molecules, in order to produce from bitumen a lighter product such as gasoline, as well as a heavy residue product. Logwinuk video testimony.

11. According to Mr. Campbell, the Gibson letter of intent was particularly important because unless you had a market outlet for it, financing would not follow.
12. On July 24, 1995, Solv-Ex announced in a press release that it acquired the Fort Hills oil sands lease, located adjacent to Lease 5, covering approximately 50,000 acres and containing, according to preliminary estimates, approximately 3 billion barrels of recoverable oil. Ex. 775, ¶ 1.
13. By August 1, 1995, Solv-Ex reported to its shareholders that the permit applications and Environmental Impact Assessment for development of Lease 5 had been filed with the Canadian government. Ex. 776, p. 1.
14. In the September 26, 1995 press release, Mr. Rendall stated that the upgraded bitumen process together with the Gibson marketing agreement “assures product marketability and should yield production in excess of design capacity of 14,000 barrels a day of heavy oil, according to the final audit report.” Ex. 781, ¶ 1. Plant “commissioning ... (is) targeted for late 1996.” *Id.*, at ¶ 5. Financial presentations have been well received, according to Solv-Ex’s financial consultant, Charter Oak Capital. *Id.*, at ¶ 6. The proposed plant was to consist of four logwasher “circuits.” Exs. 104, 106, 506.
15. In the December 12, 1995 press release, Solv-Ex announced that it received formal approval from the Alberta Energy and Utilities Board to proceed with construction

on Lease 5 of the oil extraction plant (with subsequent construction of a minerals processing plant to follow). Ex. 787, ¶¶ 1, 2. The target date for commencing production of the oil extraction facility was to be late 1996 or early 1997. Id., at ¶ 5. The capacity could exceed 10,000 barrels of oil per day depending on the blend and the feed rate of the bitumen. Id., at ¶ 1. At the request of Solv-Ex, the permit characterized the plant or project as “experimental” in order to ensure that: (i) the royalty to be received by the Crown on production would be limited to one percent (1%) until Solv-Ex requested commercial status for the plant; (ii) Solv-Ex would not be prejudiced in applying for certain research and development tax credits for the new plant under Canadian tax law; and (iii) no public hearings would be needed to secure the additional necessary permits. Ex. 520.

16. On January 17, 1996, Solv-Ex announced in a press release that it had entered into a letter of intent with Leduc Industries, Ltd. for construction of the planned 14,000-barrel-per-day oil extraction and upgrading plant on Lease 5 (at an estimated capital cost of \$100 million). Ex. 792, ¶ 1.
17. Solv-Ex raised \$73 million from various sources, including investors, in 1996.
18. Mr. Rendall stated in a conference call on February 9, 1996 that Solv-Ex’s objective was to produce oil at \$5 to \$6 per barrel in early 1997. Ex. 795, pp. 4, 5. Mr. Rendall also stated that approximately \$200 million was needed to complete all of Solv-Ex’s projects. Id., at p. 9.

19. In a conference call on March 26, 1996, Mr. Rendall stated that the schedule envisioned meeting the objective of completing construction by year-end, with planned cash flow by mid-1997 and full production by year-end 1997. Ex. 802, pp. 3, 14, 15.
20. In the August 19, 1996 conference call, Mr. Rendall expressed Solv-Ex's intent, based upon available capital, to start production in the first quarter of 1997.
21. In the August 22, 1996 press release, Mr. Rendall stated, "We have sufficient funds on hand to ensure our facility will become operational on a commercial basis... (and) that the project is on schedule and under budget" during the first quarter of 1997. Ex. 812, ¶ 2. Mr. Rendall also indicated that there were delays in completing total financing caused by skeptical reports in the media about the viability of the Solv-Ex bitumen extraction process. Ex. 812, ¶ 3. Mr. Rendall further stated that "it has been necessary for us to adapt to the new circumstances in order to begin generating positive cash flow early next year and reach full production of pipelineable oil products later in the year." Id.
22. In the August 26, 1996 conference call, Mr. Rendall reported that construction was continuing and expressed the belief that Solv-Ex had the funds available to get into cash flow in the first quarter of 1997 if the plant was commissioned.. Ex. 813, pp. 4-5.
23. At about this time, Solv-Ex realized they could not afford a visbreaker, so they decided to try to filter the bitumen to produce a much coarser product. Unprocessed

bitumen is very difficult to filter because of its viscosity, “like trying to filter cold molasses or tar.” Logwinuk video testimony.

24. To be salable, the bitumen recovered from oil sands must contain no more than .5% solids after it is separated from the sand. Ex. 20. To be pipelineable, bitumen must be “residue free.” Ex. 104; Logwinuk trial testimony. Bitumen which cannot be transported by pipeline must be transported to buyers by truck. Exs. 104, 106.
25. In an August 26, 1996 letter to shareholders, Mr. Rendall stated that, although Solv-Ex still intended to produce “in excess of 14,000 per day of pipelineable oil ...in 1997,” the company would instead commence production in early 1997 of “100,000 barrels per month” of filtered bitumen which would be “readily marketable” as a means of generating cash flow. Ex. 20. He publicly announced in the August 26, 1996 letter that Solv-Ex had now established through internal and independent testing that it could consistently produce filtered bitumen from Lease 5 which met the .5% solids specification necessary for marketability without using a visbreaker. Id. This statement was without factual support and misleadingly optimistic as the independent lab work on filtration performed for Solv-Ex in August 1996 was not conducted on material from Lease 5; rather, it was conducted on a reconstituted material made from previously-processed oil sands extracted from a location outside Lease 5. Metcalf I, 140-143; Ex. 112. Nor did the results of those tests justify the conclusion Solv-Ex could consistently produce “readily marketable” bitumen through filtration.

26. Both Campbell and Rendall knew the letter of intent with Gibson required a visbroken product and that they had not even presented, much less executed, a marketing arrangement for the filtered bitumen. However, they failed to disclose that they had no proven way to filter the bitumen and that they had no marketing agreement to sell the filtered product even if they could produce it. The failure to disclose these facts was material and made the August 26 letter to shareholders misleading.
27. On October 1, 1996, Solv-Ex first submitted an order to the Mott Corporation to begin design and then construction of a 44-inch filter for installation at the Lease 5 plant in hopes it could be used to filter the bitumen on a production level. This was completely unproven technology. Nonetheless, in the October 18, 1996 conference call, Mr. Rendall stated that he saw no delays to the company's targets for completing the oil extraction plant for commissioning in the first quarter of 1997. Ex. 824, p. 1.
28. In an October 14, 1996 telephone conference call with investors, securities analysts and broker-dealers, Mr. Rendall reiterated that production of filtered bitumen would commence during the first quarter of 1997. Ex. 25. During the same conference call, Mr. Campbell stated that the bitumen to be produced would meet "commonly accepted specifications, both in terms of contained water and solids." Ex. 25, p. 3. Given that sand from Lease 5 had never been processed and Mott had only been retained to begin to design a completely untested filter only two weeks earlier, these statements were without factual basis and completely unrealistic. Both Campbell and

Rendall failed to disclose they had no proven technology to filter Lease 5 bitumen or a committed marketer for such a product.

29. On October 28, 1996, Solv-Ex announced that it was “on target to achieve production of heavy oil during the first quarter of 1997” at Lease 5. Ex. 26A. In the press release, Solv-Ex characterized the anticipated start-up as “a ‘major milestone’ which will establish the capabilities of its technology on a fully operational basis.” Ex. 26A.
30. On November 27, 1996, Solv-Ex reiterated that it was currently constructing its Lease 5 plant, “with production scheduled for the first quarter of 1997.” Ex. 29.
31. When it was clear the 44-inch production scale filter could not be designed and constructed in time to meet the widely publicized production schedule, Mr. Rendall directed Solv-Ex personnel to order a prototype 24-inch diameter Mott filter in November 1996. Fox video testimony.
32. In the December 3, 1996 conference call, Mr. Rendall stated:

“[W]e are still on track with production of oil. Our schedule is for oil in the first quarter of 1997, and testing of the log washer with its ancillary fines reduction equipment will occur in December and January. Plus we are within our budget ... [W]e plan to establish our pipelineable crude product by the fourth quarter of 1997, using a hydrovisbreaker ... [A]s to the oil itself, the quality of the oil is exactly as currently being marketed by Gibson in the market.”

Many aspects of this statement are false. Without proven technology, there was no realistic possibility the testing could occur in December or oil production in the first

quarter of 1997. There was also no evidence Solv-Ex was or could produce the quality of oil currently being marketed by Gibson.

33. In response to a question as to whether Gibson had made any financial commitment during the same conference call, Mr. Campbell said, “Gibson is, in fact, moving forward towards securing equipment for the purpose of moving Solv-Ex’s product to market.” This was a false statement as Gibson had no marketing agreement with Solv-Ex and never indicated it was procuring such equipment. (To the contrary, since a pipeline was proposed for the area in the near future, Gibson had already concluded a substantial investment in trucks was not prudent.)
34. During the December 3, 1996 conference call, Mr. Rendall also stated that “we have a \$13 million contingency to keep to our original oil production schedule.” He further stated, “... please remember that the successful operation of our plant in the first quarter is planned to bring in a revenue stream of \$1 million per month, rising to \$4 million by the third quarter.” Also during the December 3, 1996 conference call, Mr. Rendall stated, “... we plan to establish continuous operation of three logwashers, two of which will be installed in December of this year.” Exs. 831, pp. 1, 2, 3; 30. This was materially false and misleading as the internal Solv-Ex objective as of December 1996, as communicated by Mr. Rendall to company personnel, was only to install one of the logwasher trains, and demonstrate that it could be operated to produce bitumen in some amount or separate some amount of bitumen from sand

by the end of March 1997. Moreover, two weeks later in mid-December 1996, portions of only one logwasher train were on site. Ex. 30; Fox video testimony.

35. In spite of his statement in the December 3, 1996 conference call, Mr. Campbell first began negotiating an actual contract allowing Solv-Ex to sell filtered bitumen to Gibson in January or February of 1997.
36. On January 8, 1997, Solv-Ex concluded tests of the 4-inch filter on Lease 5 bitumen at the Albuquerque pilot plant; these tests actually revealed various operational problems and failed to produce bitumen meeting the .5% solids specifications. Exs. 111, App. B; 113.
37. In the January 10, 1997 conference call, Mr. Rendall stated Solv-Ex's objectives for 1997, among which were "establishing the capacity of one logwasher in the first quarter of 1997." Ex. 832, p. 1. He made this statement without disclosing the complete failure of the mini-model filter tests just two days before. Rendall also stated:

Around the middle of February, when the plant is available for testing, we intend to test it with twelve test runs. We have defined the conditions of each test run. That would involve about 500 barrels a day initially, in February. Once we establish the conditions for continuous testing, we expect in March to be running at the rate of about 100,000 barrels a month.

Ex. 832, p. 5.

38. In a January 10, 1997 conference call with investors, securities analysts and broker-dealers, Mr. Rendall reiterated that "[t]he full plant is expected to be completed

around the middle of February for testing, and continuous production is planned for March.” Ex. 31, p. 10.

39. In the January 21, 1997 press release, Solv-Ex stated that it is “well positioned to achieve its objectives ... and is moving towards production of oil (bitumen) during the first quarter of 1997 from a plant currently under construction on its oil sands lease in Alberta.” Ex. 835, ¶¶ 7-8.
40. In the February 10, 1997 conference call, Mr. Rendall represented the status of the oil extraction plant in the following terms:

Originally, we had planned to test the unit, extraction unit, which is in place, in February. We now have decided to move forward to the complete plant being available for shakedown and production in a continuous basis as a more appropriate way in which to handle this plant. The plant is a big plant, needs to be shaken down, and started up and not stopped. We have a team up there in training so that when the startup and shakedown occurs, we’re ready for it. March for startup.

Ex. 839, p. 1 (¶ 10). Mr. Rendall further stated, “What we have to establish in the first quarter [is] that the equipment is lined up to produce the oil [and that] will produce a marketable oil. We are very confident the process works, and it works remarkably well. We just have to shake down the equipment to establish it.” *Id.*, at p. 5. This is a material misstatement since there was no factual basis from which Rendall could conclude the process worked at all at the production level much less “remarkably well.” It is also inaccurate in that most of the full scale equipment had not even been installed, much less operated to actually produce a marketable product.

Mr. Rendall was also aware that the filtration problems continued and no bitumen meeting Gibson standards had ever been produced from Lease 5.

41. In the February 25, 1997 conference call, Mr. Rendall voiced his opinion that “this thing will run immediately” and “[w]ithin a day I’ll be producing good oil,” but “it’s not a fact until I do it.” Ex. 842, p. 7 (¶ 5). Also, he reiterated the goal of “[m]arketable oil by the end of the first quarter.” Id., at p. 2 (¶ 9). This hyperbole could be excused except that it fueled the unrealistic expectations created by Rendall’s earlier misrepresentations.
42. In the March 6, 1997 press release, Solv-Ex stated that it “expects to commence oil production from its first-stage plant in Alberta before the end of March 1997.” Ex. 846, ¶ 1. According to the project manager, Steve Lane, “all equipment required for primary extraction of heavy oil (bitumen) is in place and work is totally proceeding on schedule to complete final electrical, piping and instrument installations.” Id., at ¶ 2. This is misleading as it fails to disclose this equipment was experimental and no proven product has even been produced.
43. On March 29, 1997, Solv-Ex personnel attempted the first test of the equipment at the Solv-Ex Lease 5 Alberta site. Ex. 111, App. F. At a very early point in the March 29, 1997 test of the plant, Solv-Ex personnel determined that modifications in the water circulation and clarification circuit at the Alberta plant would be needed to achieve continuous operations. Ex. 111, App. F. Moreover, as of March 29, 1997, no installation of automatic instrumentation to record temperature, steam pressure and

flow rates during the bitumen extraction process had been completed so production scale operation was still purely theoretical.

44. During the March 29, 1997 test, settling and build-up of solids occurred in the pump box, a component of the logwasher train, in an amount significantly greater than anticipated. Ex. 111, App. F. Due to the build-up of fine particle solids, the filters were “blinded” and the logwasher had to be shut down after just 12 hours of operation. Ex. 111, App. F; Fox video testimony. Messrs. Campbell and Rendall were both aware the filtration problem had forced the shutdown. Recognizing this would make all prior bitumen production predictions completely impossible, Mr. Campbell told Mr. Rendall the NASDAQ and others were expecting production by the end of March, so they better issue a statement. After numerous conversations over the weekend with Mr. Rendall, Mr. Campbell drafted a press release at 6:00 a.m. on March 31, 1997 and faxed it to NASDAQ. Solv-Ex announced that “bitumen production had commenced” at its Lease 5 oil plant. Ex. 35A. This was a material misstatement clearly designed to mislead investors.
45. In an April 7, 1997 conference call, Mr. Rendall stated, “... we have produced oil in a commercially-sized module on our lease in the Athabasca oil sands of Canada.” He represented the plant as “operational.” He concluded, “Our oil process works in a commercially-sized module.” Ex. 851. This was a material misrepresentation of fact designed to mislead investors.

46. It was not coincidental that on April 15, 1997 Solv-Ex announced it had “placed” \$22 million in debentures which could be converted into Solv-Ex common stock. Ex. 853.
47. Following the March 29, 1997 start-up of the Lease 5 logwasher, both Messrs. Campbell and Rendall knew Solv-Ex operated the logwasher only for an isolated test and demonstration runs of no more than six hours. Neither took any action to correct the overly optimistic predictions they had made with regard to the timing or amount of production from the Alberta plant.
48. Following several unsuccessful attempts during early April 1997, Solv-Ex personnel first obtained a measurable amount of filtered Solv-Ex bitumen at the Lease 5 plant using the 24-inch prototype Mott filter on April 21, 1997. Exs. 108, 110, 111; Fox video testimony.
49. After two to three cycles of operation of the prototype plant at Lease 5 on April 21, 1997, operational problems developed with the logwasher circuit which again required that the system be shut down. Ex. 111, p. 11
50. The first successful filtration occurred on April 21, 1997, and the amount of filtered bitumen Solv-Ex produced through the use of the 24-inch prototype Mott filter was only two 55-gallon drums. Moreover, the production could not be duplicated. Ex. 110; Fox video testimony.
51. In the April 30, 1997 press release, Solv-Ex reported it was “pleased with the initial testing, the primary extraction circuit worked well in the commissioning process [and] that testing would now be focused on the bitumen cleaning system which

follows primary extraction.“ Ex. 854, ¶ 4. It was also stated the quality of the bitumen produced in primary extraction to date is better than expected. The press release further stated that “we do not believe we will have difficulty in producing on a continuous basis bitumen which meets market specifications. Our objective is to... be in continuous operation by the end of May.” Ex. 36. There was no factual basis to support any of those statements, except perhaps that relating to the quality, as it does not attribute the “expectation” to any source. These are material misstatements of fact.

52. Solv-Ex was never able to sustain continuous operation of the logwasher or to produce oil at the Alberta plant.
53. Solv-Ex never finalized any marketing agreements with Gibson for any filtered bitumen product from Lease 5 and therefore had no reliable method to market filtered bitumen even if it had been able to produce it.

Minerals

54. In 1994, Solv-Ex announced it had discovered that it could produce bitumen from Athabasca tar sands by a process which did not use solvents and did not generate toxic tailings.
55. In a further effort to ameliorate the environmental impact of mining bitumen, Solv-Ex obtained more than 100 tons of toxic fine tailings (commonly known as sludge) generated by the nearby oil sands processing plant operated by Suncor. Ex. 776, p. 2. From 1992 through 1994, Solv-Ex conducted several laboratory and pilot plant

tests on these tailings and discovered some potential to extract and produce minerals and synthetics from them and detoxify the tailings for acceptable land fill. Ex. 785, p. 4. Solv-Ex also conducted mineral tests on the fine clay derived from the oil sands from Lease 5 for gold, titanium, and other mineral extracts. Exs. 502-504, 525, 548-550, 729, 732.

56. In August 1993, Solv-Ex announced that the initial phase of testing and evaluation of its program for commercial recovery of metals had been completed by processing about 100 tons of Suncor pond sludge tailings.
57. Soon thereafter, Solv-Ex announced its ability to produce a “unique” form of aluminum oxide (commonly called “alumina”) from the oil sands clays. Exs. 11, 33. The alumina would be extracted as a by-product from the tailings produced from processing the bitumen. Solv-Ex touted this form of “co-production” as being both more environmentally friendly and more economically successful than existing methods of bitumen extraction. From at least 1994 to 1999, Solv-Ex made a concentrated effort to make a type of aluminum oxide that was suitable for making metallic aluminum.
58. On October 5, 1993, Solv-Ex announced that roasting of the double salts in the process of producing the alumina generated an intermediate product which had properties suitable for insulation. In January 1997, the company announced it had been issued a patent for this insulation including shaping it into rigid forms. Ex. 32. No market was developed and it was never produced.

59. By December 1994, Solv-Ex had completed the feasibility study that provided a complete technical and financial description of the project. Ex. 506. The feasibility study: (i) defined the design for a co-production facility on Lease 5 to produce 10,000 barrels per day of pipelineable crude oil ("PCO") and 64,000 tons per year of alumina to be custom smelted and sold as aluminum; (ii) provided detailed estimates of capital and operating costs for the facility (together with projected revenue streams); and (iii) provided a comprehensive analysis of the project as a whole to determine the amount of financing needed for the project. Ex. 506, pp. I-3, 5-2. Solv-Ex estimated the capital cost of the oil extraction facility at \$95 million and the mineral processing plant at \$25 million. Ex. 506, p. 5-1.
60. The feasibility study stated that it would be subjected to a two-part technical and financial audit in early 1995. The Pace Consultants, Inc. ("Pace"), an independent consulting firm with expertise in hydrocarbon processing and marketing, was retained to review the bitumen extraction and PCO production sections of the planned plant. Ex. 508. Cumming Cockburn, Ltd. was retained to update its January 1994 financial and technical audit for the minerals processing portion of the co-production facility. Ex. 550.
61. Subsequent research further showed that basic potassium aluminum sulfate ("BKAS") could be produced from the clay residue tailings as yet another intermediate product in the production of alumina. Exs.. 549, 589, 596, 602-603, 637A, 638. Solv-Ex compared, and attempted to market, its BKAS as similar to a naturally occurring

mineral, Titanium Dioxide (“TiO₂”), the “Rolls Royce” of paper coating and fillers. Solv-Ex renamed the synthetic mineral “Titanium Dioxide Substitute or TiO₂S.”

62. Natural Titanium Dioxide displays superior optical qualities, and consequently sells for roughly \$2,000 per ton, compared to much lower prices for other common pigments, such as calcined kaolin (\$550 per ton) and precipitated calcium carbonate (“PCC”) (\$150-200 per ton). Ex. 52, pp. 5-16. Solv-Ex commissioned various tests to show this synthetic mineral had potential applications as a filler in the production of photocopy paper, glossy paper, ink, plastic and coatings. Exs. 653, 692, 699, 701-702.
63. In pursuit of other potential applications of TiO₂S, Solv-Ex commissioned testing which resulted in a preliminary report from D.L. Laboratories (“D.L. Labs”), dated July 26, 1996. Solv-Ex, however, had great difficulty in producing sufficient quantities of TiO₂S for testing. By September 1996, only minimal quantities of TiO₂S had been delivered for testing by D.L. Labs, for possible use as a paint additive. Exs. 60; 567. The first test by D.L. Labs showed that the small TiO₂S sample delivered did not grind well enough to be acceptable. Ex. 567. The report of D.L. Labs’ second test cited the determination that TiO₂S “cannot be readily incorporated into [paint] coatings formulations.” Ex. 60. D.L. Labs recommended substantial further study. Ex. 588, p. 4.
64. In June 1996, Solv-Ex also had TiO₂S evaluated by Utility Development Corporation (“UDC”) as a potential filler for plastics. UDC reported that the Solv-Ex

product appeared to serve as a potentially acceptable filler in certain plastic application trials, but recommended different surface treatments so that the product could be a cost effective competitor. It also recommended that Solv-Ex evaluate a finer particle size. Exs. 46, 587.

65. In a September 5, 1996 conference call, Mr. Rendall stated that “[i]n terms of paint [TiO₂S] meets the specifications. In the case of fillers for [plastics] resins, it also does.” Ex. 816. Any reference to the UDC or D.L. Labs test which did not support this conclusion was omitted.
66. Pilot plants to produce paper pigments typically cost several million dollars to construct, and must have a capacity of approximately 250 liters. The purpose of the pilot plant is to produce tanker-truck-sized samples, each of some 15 to 20 tons in size, for field trials by paper manufacturers. Gann trial testimony. Solv-Ex attempted to scale up its production of TiO₂S in its pilot plant in spring 1997 and to meet specific requirements for particle size. Ex. 72; Metcalf I 95-96, 96-97. Solv-Ex was not successful in its attempts to produce TiO₂S at the required particle size at the pilot plant level. Ex. 72; Metcalf I, 95-96.
67. As of fall 1996 and continuing to at least March 1997, Solv-Ex’s Albuquerque pilot plant equipment was still only capable of making 50 to 100 pounds of TiO₂S per day. Nielsen 304.
68. As reported by UDC and D.L. Labs, the TiO₂S particles that Solv-Ex produced in its pilot plant reactors remained too large for its anticipated industrial applications.

Metcalf I 112-113; Nielsen 160-161, 263. Solv-Ex's attempts to reduce the particle size of TiO₂S by grinding it with its own laboratory equipment proved unsatisfactory. Nielsen 160. Although grinding equipment was shown in flow sheets for the proposed minerals plant in Alberta, Solv-Ex never installed or tested the grinding equipment in its Albuquerque pilot plant. Nielsen 263, 315.

69. In a September 6, 1996 press release, Ex. 22, the company announced:

Progress has been excellent in development of markets for the products which can be produced from the fine clays, particularly in view of continued testing of the new Solv-Ex cell for production of electrolytic aluminum and independent testing to date of a potassium-based synthetic mineral which appears quite suitable for the huge filler markets in paper, paint and plastics.

Solv-Ex said that it continues to believe that the fine clays represent a source of minerals and metals which greatly exceed the value of the oil contained in the oil sands and that the tailings can become a tremendous asset rather than a major item of environmental controversy. It has been publicly estimated that more than a billion tons of the tailings, which many observers consider to be highly toxic, will be in place by the year 2010, much of which is in close proximity to the Athabasca River. (Emphasis added.)

At the time of this press release, there was no factual basis to conclude TiO₂S was “quite suitable for the huge filler markets in paper, paint, and plastics.” Mr. Campbell prepared the press release and knew of no data to support these conclusions. Even if he quoted Mr. Rendall, which he gave no indication of, a corporate officer should not be allowed to publish material misrepresentations without any legal responsibility.

70. In May 1996, a Solv-Ex consultant, Dr. George Ionides, issued the “Papermaking Pigments Market Study” to define potential markets for papermaking pigments in the regions of North America which could be economically served by the Solv-Ex mineral pigment production plant in Alberta. After interviews with four senior paper/pigment industry technical experts, Dr. Ionides concluded that with its “anticipated” properties TiO₂S could sell in the range of \$600 - \$800 per ton. Exs.. 657, p. 5-16; 662, pp. 1-2. Mr. Rendall testified it could be produced for about \$200 per ton.
71. Dr. Ionides arranged for TiO₂S to be tested in papermaking trials by William Forester at Western Michigan University (“WMU”). Solv-Ex tested 400 to 450 pounds of TiO₂S as a paper filler in formulations for two types of paper on October 2 and 3, 1996 (the “October trial”). Because the amount of TiO₂S retained in the uncoated woodfree paper had not reached Forester’s target level, the WMU tests were inconclusive, and Dr. Ionides requested that WMU re-run that trial according to instructions provided by him. Ex. 54. Subsequent tests were scheduled for November.
72. During the subsequent November trial, because of TiO₂S the sheet strength suffered and the paper was very “soft.” Ex. 56 The lack of strength was reflected in some breaks in the paper made with the TiO₂S filler. Forester 22. During the November trial, the poor retention of the TiO₂S also caused a large build-up of the TiO₂S filler

on the wet end of the paper machine and thus excessive foam. Ex. 56. This prevented the machines from running efficiently.

73. After the November trial, Mr. Forester recommended further testing to determine how to regain the paper strength lost from the addition of the TiO₂S. Ex. 56. Mr. Rendall was aware of Mr. Forester's November 4, 1996 recommendations, but did not publicize them or the results of the tests.
74. On or about November 20, 1996, Solv-Ex and Raisio Chemicals ("Raisio"), an international distributor of chemicals, entered into a letter of intent for the purpose of conducting additional tests on TiO₂S. Ex. 698, p. 1. The alliance between Solv-Ex and Raisio was announced in Solv-Ex's November 27, 1996 press release. Ex. 830, ¶ 1. The press release stated that "the alliance with Raisio contemplated an aggressive testing schedule which could accelerate plans for commercial production if testing proceeds in line with expectations." Ex. 29. The results of the Forrester tests were not disclosed and this was a material omission.
75. At the end of November, TiO₂S had not been successfully tested for any commercial application. Nonetheless, in a December 3, 1996 conference call, Mr. Rendall stated:

(TiO₂S) has similar characteristics to titanium dioxide pigment, including its light-scattering properties.

With a view to securing the highest value for this product (TiO₂S) which is in coatings for high quality paper, the company has embarked on an aggressive market-driven program with Raisio Chemicals. Thousands of pounds of product from our test center in Albuquerque will be used in various coating formulations in Raisio's multimillion-dollar facilities to produce

high-quality paper in the first quarter of 1997. Based on successfully reaching our objectives, the second quarter will involve paper mills, and the third quarter should see hundreds of tons of product from Lease 5 commercially used to secure long-term contracts for continuous production in the fourth quarter of 1997.

Ex 831, p. 1 (¶¶ 7-8) (emphasis added). This statement was completely hypothetical and overly optimistic since the “Albuquerque center” had not produced thousands much less any significant quantity of pounds of product. Nor was it disclosed that all tests of TiO₂ as a paper additive had failed to produce a satisfactory formula.

76. As of January 1997, Raisio merely had performed an “initial evaluation” of but three minute 400-gram samples of TiO₂S as an additive in paper coatings and the Albuquerque test plant clearly did not and could not produce the “thousands of pounds of product” Mr. Rendall had represented would be tested in the first quarter of 1997. Ex. 58.
77. Solv-Ex never determined a filler or coating application to which TiO₂S should be targeted. In the absence of such a target Solv-Ex could not determine what specifications TiO₂S would have to meet, much less determine how to achieve such specifications.
78. Solv-Ex never even implemented a reliable cost-effective means of reducing the particle size of TiO₂S to meet the requirements for either paper or paint applications. Exs. 61, 63, 590, 604, 606.

79. In the January 31, 1997 press release, Mr. Rendall stated that Solv-Ex's "target is to be in construction of the minerals extraction plant during the first half of 1997 and achieve production before the end of the year." Ex. 837, ¶ 4.
80. In the February 10, 1997 conference call, Mr. Rendall disclosed the plans for production of TiO₂S at the rate of one ton per month at the Albuquerque pilot plant for testing from April or May, 1997. Ex. 839, p. 6 (¶ 3). There was no factual basis that could legitimately support such plans and Mr. Rendall's excessive optimism was intentionally misleading.
81. Solv-Ex's pilot plant never produced a large enough quantity of TiO₂S to conduct the necessary production-scale tests for any commercial application. Nielsen 85-86, 211; Metcalf II 185-186.

New Method of Aluminum Production

82. In late 1994, Solv-Ex tested a prototype cell to manufacture industrial grade aluminum from the alumina extracted from the Athabasca clay. The test proved the process was theoretically possible and Solv-Ex decided to upscale to the larger lab size version.
83. In the February 21, 1995 press release, Solv-Ex announced that Pat Davey, a longtime international consultant for aluminum projects of Kaiser Aluminum Corporation, had joined the board of directors to head development of the production of aluminum from the alumina produced by Solv-Ex at the "co-production plant" in Alberta, Canada. Ex. 764. In the press release Mr. Davey is quoted as saying:

The alumina produced using the Solv-Ex technology is extremely high quality and can offer significant opportunities, as well as production efficiencies and environmental benefits, for existing smelters. The possibility of further expanding our horizons through use of this alumina in a new type of electrolytic cell is particularly exciting

In that press release Solv-Ex also disclosed:

For about a year, work has been under way at Solv-Ex on new cell design and technology, which has been demonstrated at laboratory scale. Patent applications have been filed, and Solv-Ex plans to build and operate a cell capable of producing one to two pounds of aluminum per hour at its Albuquerque pilot plant.

84. In a presentation at a professional conference held on April 3, 1995, Solv-Ex described the general process of how alumina could be produced from clays contained in the Athabasca oil sands. Ex. 765. The proposed 10,000 barrel per day Solv-Ex oil facility was to produce between 64,000 to 100,000 tons per year of such alumina. Id., at p. 3 slide 23 (at p. 588031).

85. In a May 8, 1995 conference call, Mr. Rendall stated:

[W]hat I'm doing now is lining up the pilot plant here to produce one to 200 pounds an hour of alumina, and one to 200 pounds an hour of other products. So that I've got it market in tonnage, so that when I kick off the sludge project at the end of this year, I have sold everything, and this solves cash flow problems.

Ex. 767, p. 6.

86. In the June 5, 1995 conference call, Mr. Rendall stated that Solv-Ex is on track for the alumina project and that the production goals remain unchanged. Ex. 771, p. 4.

87. In the August 1, 1995 Management Letter to Shareholders, Ex 776, p.2, Mr. Rendall summarized the projected plan for the Synthetic Minerals Plant:
- Up to 100,000 tons per year of alumina products
 - Up to 200,000 tons per year of synthetic minerals from waste
 - Capital estimated at \$20 million for initial production - expansion at \$15 million
 - Marketing of synthetic minerals by ITC Corp.
 - Cash flow in early 1996
 - Complete review and audit of feasibility by Cumming Cockburn, Ltd.
 - Projected operating costs of \$25 per ton for all products
 - Permits expected in September
 - Experienced project management in place
88. On August 2, 1995, the Solv-Ex aluminum team completed the “Start-up and Operating Procedures” for a “2700 Ampere Pilot Cell.” Ex. 755. The overall purpose of the test was to determine whether Solv-Ex alumina, through electrolysis, could produce metallic aluminum at a scale larger than prototype but smaller than industrial level. The purpose of this pilot cell was to determine whether Solv-Ex alumina (to be produced from actual Lease 5 tailings) could produce metallic aluminum at 750°C in a more efficient vertical configuration of the anodes and at approximately 200°C lower than the temperature needed in existing commercial cells. If successful, both of these would be major breakthroughs in the production of aluminum since a large part of the cost of production derives from the dual costs of anode replacement and electricity.
89. In the August 28, 1995 press release, Solv-Ex announced that it had entered into a memorandum of understanding with Glencore, Ltd. (the world’s largest trader of

metallurgical grade alumina) for initial marketing of metallurgical grade alumina to be produced from oil sand tailings on Solv-Ex Lease 5. The announced agreement contemplated a \$10 million advance to assist in project financing. Ex. 778, ¶ 1. However, no advance was ever made as definitive agreements were not reached by the October 31, 1995 deadline. Ex. 783, ¶ 2. This was never publicized by Solv-Ex.

90. On or about December 8, 1995, the Solv-Ex aluminum cell team attempted to start the prototype electrolytic cell, but they were not able to reach a high enough temperature with internal heaters to process the Solv-Ex alumina and canceled the experiment after 48 hours. Vondrak Ex. 4, Ex. 1082.

91. The stated objectives of the test were:

- i. To verify that electrolysis of an Alumina suspension in an alumina saturated low-temperature eutectic NaF-AlF₃ electrolyte is practicable on a large scale.
- ii. To operate the Pilot Cell to develop operating parameters and procedures.
- iii. To determine the physical and electrical characteristics of the electrolyte.
- iv. To determine the effect of electrolyte composition and contained alumina variations on cell operation.
- v. To determine material losses and air pollution control requirements.
- vi. To determine production efficiencies.
- vii. To verify cell and electrode construction, heat balance and electrode life.
- viii. To develop a non-consumable anode.

Ex. 755, p. 1 While the team arguably had some very limited success on (i) and (ii), the remaining goals were not even partially met. Vondrak pp. 86-91.

92. In the 1995 Form 10-K, Solv-Ex announced that:

Work performed ... at (its) Pilot Plant has resulted in production of alumina which meets specifications for metallurgical grade alumina ... through standard ... processes. Evaluation of the Company's process by both independent consultant and sources with the alumina/aluminum industry has confirmed the ability to achieve these results within projected operating costs.

* * * *

Although considerable work must be performed to determine total feasibility of the process (for producing aluminum metal [as opposed to alumina]), the results of testing to date have been very encouraging and the Company has applied for patents with respect to the new process.

Ex. 863 at 10 ¶ 5; 13 ¶ 3 (emphasis added). These statements were designed to mislead investors as no quantity of alumina was, or could be, produced “which meets specifications for metallurgical grade” and certainly not through anything approaching “standard processes.” Nor was there any evidence either the Company or an independent consultant had confirmed this could be done at competitive costs.

93. On January 18-19, 1996, Solv-Ex again attempted to operate the prototype electrolytic cell. Solv-Ex personnel began heating the cell on January 18, 1996, and the heating system again failed. Ex. 75. Solv-Ex shut down the cell after it began leaking electrolyte a second time, the cell experienced arcing (electrical shorting through

sparks), and the cell temperature dropped below the required operating level. Vondrak p. 65; Ex. 75, pp. 533002, 533004-5; Kennedy p. 42.

94. Solv-Ex shut down the operation to prevent the cell from damaging itself further through the arcing and cooling. Kennedy pp. 45-45. The copper anodes used in the prototype cell were destroyed during the test. Ex. 76, pp. 534002, 534004, 534008; Kennedy p. 86. At the time of the test and during the autopsy of the cell, Solv-Ex personnel were unable to objectively confirm that the prototype electrolytic cell actually produced any measurable quantity of aluminum during the test. Vondrak pp. 90-91; Exs. 76, pp. 534012-13; 757 Strahl letter. In short, the test was an unmitigated failure.
95. The summary section of Solv-Ex's internal autopsy report on the cell test states that the "[a]utopsy of the 2700 Ampere Pilot Cell indicated serious problems in the materials used and construction of the cell." Ex. 76, p. 534002. A letter attached to the internal autopsy report states that "[t]he existing cell design served its purpose in showing how difficult it is to design a new process without fully appreciating its complexity. We have learned that both the materials of construction used and the existing design are incapable of sustained operation." Ex. 76, p. 534010.
96. The outside expert, Dr. Erwin Strahl, retained by Solv-Ex to create and control the electrolyte bath in the cell, concluded "as a result of our testing to date and the autopsy observations, some very fundamental problems need to be readdressed." Ex. 757.

97. Had the test of the prototype 2700 ampere electrolytic cell been a success, the process engineer at Solv-Ex would then have recommended the building and testing of a prototype 10,000 ampere cell. Vondrak pp. 94-95. Rather than advancing to the 10,000 ampere cell, however, after the test of the prototype 2700 ampere electrolytic cell, the process engineer and chemical engineer jointly proposed reducing laboratory tests on the cell back to laboratory bench scale where they had experienced some limited success in 1995. Vondrak p. 91; Ex. 76, p. 534013.
98. On January 23, 1996, Solv-Ex issued a press release authored by Herbert Campbell. (Ex. 11). It says *inter alia*:

Solv-Ex has successfully completed initial testing of its new aluminum reduction technology and prototype electronic cell, Solv-Ex Chairman and Chief Executive Officer John S. Rendell announced today. The Solv-Ex cell was operated at a temperature of 750 degrees centigrade, which is more than 200 degrees centigrade lower than used in existing aluminum smelters. The test used nonconsumable electrodes and a unique grade of highly porous alumina which is produced at the company's test facility in Albuquerque.

These statements are false and misleading. The December 1995 and January 1996 testing could not be considered "successful" by any accepted definition of the term and Mr. Rendell knew facts directly contradicting such an assessment. The statement is also misleading in referring to the lower temperature because the process produced no measurable quantity of aluminum and the "nonconsumable electrodes" were in fact consumed. Based on the technical nature of these tests and Mr. Campbell's attribution of the conclusions to Rendell, Campbell may be excused from responsibility for propagating these falsehoods. (Tr. 932-7; 950) However, at least

by the following day, Campbell became aware the cell had sprung a leak during the test and had to be shut down. (Tr. 956-8) Following the autopsy of the cell, neither Mr. Campbell nor Mr. Rendell took any action to correct the misimpression of success created by the January 23, 1996 press release.

99. Solv-Ex issued another press release on February 26, 1996 stating, among other things, that “[f]inally, our new cell for commercial operations (which will now be proven in the field) involves panels of about 6’0” x 6’0” compared with the approximate 2’0” x 2’0” panels we are currently working with in Albuquerque. The scale up factors are quite reasonable.” Ex. 13, p. 3. This is a complete distortion of the actual facts as the cell tests were in reality being scaled back to bench scale and not up to production scale. This document was apparently drafted by Mr. Butler and revised by Mr. Campbell.
100. Solv-Ex then issued a March 11, 1996 press release stating, “The primary mineral of interest in the clays is alumina, and Solv-Ex announced in January 1996 that it had successfully tested a new design of an electrolytic cell to produce aluminum metal from the alumina.” Ex. 14 (emphasis added). By any objectively reasonable definition of “successful,” this was completely untrue.
101. In an August 26, 1996 letter to Solv-Ex shareholders, Mr. Rendall wrote that “[w]e have made further progress since the cell was first tested successfully in January of this year and we see no ‘show-stoppers’ in proceeding to installation of one or more

commercial cells as soon as the mineral extraction technology has been demonstrated on a commercial basis.” Ex. 20.

102. In the September 5, 1996 conference call, Mr. Rendall stated that “[w]e are getting the aluminum cell working continuously. We have proven out a dimensionally stable anode. We intend next year to have a prototype working to put up a commercial plant.” Ex. 816, p. 6 (¶ 12). An “aluminum cell working continuously” never existed and this is a total fabrication intended to mislead investors.
103. In the September 10, 1996 press release, Mr. Rendall stated that Solv-Ex received a patent for the new electrolytic cell first “successfully” tested in January 1996. Ex. 818, ¶ 1. He also stated that Solv-Ex had made “significant headway in confirming the ability to utilize non-consumable anodes on a consistent bases.” Id., at ¶ 2. There is no believable evidence of the ability of Solv-Ex to create test or use non-consumable anodes.
104. In the December 3, 1996 conference call, Mr. Rendall stated, “We have further developed an aluminum cell to the stage of continuous production with a nonconsumable anode at bench scale.” Ex. 831, p. 2. This was also a material misstatement of fact.
105. Solv-Ex never produced or successfully developed a non-consumable anode for production of metallic aluminum. Kennedy pp. 91-92.

106. Rendall, Campbell and Solv-Ex never disclosed to the investing public that after the test of the prototype 2700 ampere cell, Solv-Ex was forced to scale back its testing to laboratory scale.
107. Solv-Ex's 10-K and amended 10-K for the period ending June 30, 1996 contained misleading statements regarding the status of Solv-Ex's aluminum reduction cell testing and technology. Exs. 40, 40a.

Summary

108. John Rendall had a dream to revolutionize the two industries in which he had worked: bitumen extraction and aluminum production. That dream blinded him to the practical scientific impediments to the fulfillment of that dream. When confronted with negative results, "he would have a tendency to ignore that information or work around it or repeat the experiment over and over and over again." Metcalf p. 221.
109. Collectively read, the press releases, shareholder letters, and other statements, which Defendants disseminated on a virtually weekly basis, created the false impression that Solv-Ex was on the verge of generating revenues from the alumina, TiO₂, and bitumen production. In fact, the evidence demonstrates that at the time many of these statements were disseminated, Solv-Ex was in various stages of research and development with respect to the three technologies, but that commercial exploitation of any of them was never more than a theoretical possibility, and this was never disclosed.

Conclusions of Law

1. At all times relevant to the complaint, Solv-Ex was registered with the Commission pursuant to Section 12(g) of the Securities Exchange Act of 1934 (“Exchange Act”).
2. Solv-Ex was therefore required to file periodic reports with the Commission pursuant to Section 13(a) of the Exchange Act and Rules 12b-20, 13a-1, and 13a-13 thereunder.
3. In enforcement actions, the Commission “appears ... not as an ordinary litigant, but as a statutory guardian charged with safeguarding the public interest in enforcing the securities laws.” SEC v. Management Dynamics, Inc., 515 F.2d 801, 808 (2^d Cir. 1975).
4. This enforcement action involves a pattern of statements issued by a public company and its two key executive officers that created the misleading impression that each of three revolutionary new technologies being developed by the company was a virtually unqualified success. The pattern of these statements created in the mind of any reasonable investor the expectation that commercial exploitation of the technologies, each with substantial revenue stream, was not only assured, but would occur in the very near future.
5. Section 10(b) of the Securities Exchange Act of 1934 (“Exchange Act”) [15 U.S.C. § 78j(b)] and Rule 10b-5 promulgated thereunder [17 C.F.R. 240.10b-5] and Section 17(a) of the Securities Act of 1933 (“Securities Act”) [15 U.S.C. § 77q(a)] prohibit persons and entities from, among other things, making material misstatements or

omitting to state material facts in connection with the purchase or sale of any security. Clegg v. Conk, 507 F.2d 1351 (10th Cir. 1974); see generally Thomas Lee Hayen, 2 THE LAW OF SECURITIES REGULATION § 13.2 p. 461 (3^d ed.).

6. A statement is material if a reasonable investor would consider it important in determining whether to buy or sell a stock. Grossman v. Novell, Inc., 120 F.3d 1112, 1119 (10th Cir. 1997). “Material facts include those ‘which affect the probable future of the company and those which may affect the desire of investors to buy, sell, or hold the company’s securities.’” SEC v. Mayhew, 121 F.3d 44, 52 (2^d Cir. 1997) (quoting SEC v. Texas Gulf Sulphur Co., 401 F.2d 833, 849 (2^d Cir. 1968)); see also Folger Adam Co. v. PMI Indus., Inc., 938 F.2d 1529 (2^d Cir.), cert. denied, 502 U.S. 983 (1991). An omission is material if there is a “substantial likelihood” that either “the omitted fact would have assumed actual significance” in the investment decision or “the omitted fact would have been viewed by the reasonable investor as having significantly altered the ‘total mix’ of information made available.” TSC Indus., Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976). Misrepresentations and omissions concerning the status and success of the development of commercially feasible core technologies for a development stage company having no revenue and no products are facially material. See Kaplan v. Rose, 49 F.3d 1363, 1374 (9th Cir. 1994) (misleading to use term “successful” to describe test results generally inconsistent with success); see also SEC v. International Chem. Dev. Corp., 469 F.2d 20, 26 (10th Cir. 1972) (material omission not disclosing that patents were not proven commercially feasible).

7. When management and directors are parties to a securities fraud, the test as to causation is whether the facts not disclosed or disclosed in a misleading fashion significantly altered the total mix of information available. IIT, an Int'l Inv. Trust v. Cornfeld, 619 F.2d 909 (2^d Cir. 1980). The false statements by the Defendants and their failure to disclose the full test results and reports of their consultants significantly altered the total mix. The Defendants' repeated issuance of press releases, which stated only the positive aspects of such tests, misled the investing public; especially because no corrective information was ever disseminated.
8. "The misleading, misrepresented or untruthful character of the release may appear from the nature of the statement considered above, or, when the facts are fully disclosed, from the half truths, omissions or absence of full candor concealed therein." Mitchell v. Texas Gulf Sulphur Co., 446 F.2d 90, 97 (10th Cir. 1971); Gilbert v. Nixon, 429 F.2d 348, 356 (10th Cir. 1970); Rogen v. Ilikon Corp., 361 F.2d 260 (1st Cir. 1966).
9. Scierter connotes an intent to deceive, manipulate or defraud. City of Philadelphia v. Fleming Cos., 269 F.2d 1245 (10th Cir. 2001); "One is not to be held liable ... because of his misleading misrepresentation or omission of material fact, the truth of the matter being unknown to the purchaser, if the party responsible for the misrepresentation or omission sustains the burden of proving that he did not know, and in the exercise of reasonable care could not have known that it was a misrepresentation or omission." Clegg v. Conk, 507 F.2d at 1358. However, "there

is a strong inference of scienter when defendants publish a statement known to be false or so contrary to available information as to suggest fraud.” Florida State Bd. of Admin. v. Green Tree, 270 F.3d 645, 665 (8th Cir. 2001). When a group of inside officials contributes to documents such as annual reports and press releases, each must assume responsibility for material misstatements. In re Gleufield, Inc., 60 F.3d 591, 593 (9th Cir. 1995) (per Kelly, J.); Holtman v. Aura Sys., 844 F. Supp. 549 (C.D. Cal. 1993). See F.F. 92. The statements of corporate officials are of particular importance to investors; the investing public “justifiably places heavy reliance on the statements and opinions of corporate insiders.” In re Apple Computer Sec. Litig., 886 F.2d 1109, 1116 (9th Cir. 1989). This would seem to be especially applicable to the officers of Solv-Ex since Campbell, Rendell, and, to a much lesser extent Butler, were responsible for the constant disclosure of all information to the financial markets. F.F. 39, 42, 51, 100.

10. Mr. Rendall made several intentional misstatements of material fact. See F.F. 25, 32, 34, 40, 44, 45, 65, 75, 98, 103, 104.
11. Mr. Campbell also intentionally made several misstatements of material fact. See F.F. 28, 33, 44, 92, 99.
12. A duty to disclose technical or developmental problems with a product may arise where a company makes strongly optimistic or concrete statements about that product that are in stark contrast to its internal reports. Glassman v. Computervision Corp., 90 F.3d 617, 635 (1st Cir. 1996); Kaplan, 49 F.3d at 1374 (defendant’s use of term

“successfully” to describe test results was inconsistent with common understanding of the term without more information). The duty to speak the full truth thus arises when Defendants make affirmative representations. Rubinstein v. Collins, 20 F.3d 160, 170 (5th Cir. 1994); Hadsell v. Hoover, 484 F.2d 123 (10th Cir. 1973); Mitchell v. Texas Gulf Sulphur Co., 446 F.2d at 100.

13. Mr. Rendall omitted material facts in several instances in which he calculated the revelation of the whole truth would negatively impact Solv-Ex in the investment markets. See F.F. 26, 28, 37, 40, 74, 75, 98.
14. Mr. Campbell also omitted material facts when he calculated the revelation of the whole truth would negatively impact Solv-Ex in the financial markets. See F.F. 26, 28.
15. Representations pertaining to future events can be the basis of fraud when the defendant knows there is no reasonable factual basis for the representation or the speaker knows of undisclosed facts tending to seriously undermine the accuracy of the statement. In re HealthCare Compare Secur. Litig., 75 F.3d 276 (7th Cir. 1996); Rubinstein v. Collins, 20 F.3d at 166; In re VeriFone Secur. Litig., 11 F.3d 865, 870 (9th Cir. 1993); Bloomenthal and Wolff, 3D SECURITIES AND FEDERAL CORPORATE LAW § 20:4 p. 20-5 (1999).
16. Mr. Rendall’s predictions as to future events were material misstatements of fact in that they were made without any factual support and/or in the face of contradictory and undisclosed factual evidence. See F.F. 25, 32, 34, 40, 75, 80.

17. Mr. Campbell's prediction of future events was a material misstatement of fact made without factual support and/or in the face of contradictory and undisclosed factual evidence. See F.F. 28.
18. John Rendall was vested with the power to direct and control, and did so, all aspects of Solv-Ex's business and was therefore responsible for Solv-Ex's misleading and incorrect statements in the official filings. As a control person of Solv-Ex pursuant to Section 20(a) of the Exchange Act, Mr. Rendall is directly liable for the company's reporting violations under Section 13(a) and the rules thereunder. See Lanza v. Drexel & Co., 479 F.2d 1277, 1299 (2^d Cir. 1973) (persons who have actual authority to direct the activities of the primary wrongdoer and have culpable participation in the activities are control persons within the meaning of Section 20(a)). See also Arthur Children's Trust v. Keim, 994 F.2d 1390, 1396-97 (9th Cir. 1993) (members of management committee were control persons because they made major business decisions affecting the venture).
19. Herbert Campbell was also a control person and had access to all of the negative tests and consultants' caveats which he chose to largely ignore in drafting the press releases which created a misleadingly optimistic picture of the prospects for each of the three Solv-Ex technologies. See Mitchell v. Texas Gulf Sulphur Co., 446 F.2d at 90.
20. Mr. Campbell was aware of facts from which he knew or should have known the prototype electrolytic cell leaded during the January 18, 1996 test, and was not the


“success” he claimed in the January 23 and February 26, 1996 press releases. United States v. Schaefer, 299 F.2d 625 (7th Cir. 1962) (wilful ignorance unavailing when others relying on representations as fact). See F.F. 98. Mr. Campbell knew or should have known that the information in Solv-Ex’s 10-K filing was false or misleading. United States v. Benjamin, 328 F.2d 859, 861 (2d Cir. 1964) (corporate attorney cannot deliberately close his eyes and recklessly state as facts things he was ignorant of). See also Matter of Edward F. Duffy, 1995 WL 786625 (SEC 1995) (holding corporate attorney responsible for corporate press releases and securities filings he participated in). F.F. 92, 99. Even had his role at Solv-Ex been limited to that of corporate counsel, however, Mr. Campbell’s conduct would be recklessly violative of the federal securities laws in that he both knew and was reckless in failure to verify erroneous factual statements he drafted. Rubin v. Schottenstein, Zox & Dunn, 143 F.3d 263, 267 (6th Cir. 1998) (“[T]here is nothing special about [the defendant’s] status as an attorney that negates his Rule 10b-5 duty to disclose, a duty that ordinarily would devolve under Rule 10b-5 upon a third party under these circumstances An accountant or lawyer, for instance, who prepares a dishonest statement is a primary participant in a violation.”) (citing SEC v. Coffey, 493 F.2d 1304, 1315 (6th Cir. 1974)). “Recklessness,” defined as conduct that is an extreme departure from the standards of ordinary care, and which presents a danger of misleading buyers or sellers that is either known to the defendant or is so obvious that

the actor must have been aware of it, can satisfy the scienter requirement for section 10(b), Securities Exchange Act of 1934.” City of Philadelphia, 264 F.3d at 1258.

21. Solv-Ex, Rendall, and Campbell violated Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5 thereunder, and Section 17(a) of the Securities Act of 1933.
22. The European “trading program” was never implemented and therefore the restricted stock was never issued, thus no SEC reporting requirements were triggered.
23. Defendants rely on the “bespeaks caution” doctrine to shield their public statements. The “bespeaks caution” doctrine should be applied very carefully since it provides an incentive to misrepresent the truth. In re Donald J. Trump Casino Sec. Litig.-Taj Mahal Litig., 7 F.3d 357, 371 (3^d Cir. 1993). The cautionary statements in the Solv-Ex filings do not counterbalance the glowing projections in the Defendants’ press releases and broker conferences. See Whirlpool Fin. Corp. v. GN Holdings, Inc., 873 F. Supp. 111, 123-24 (N.D. Ill. 1995); In re Colonial Ltd. Partnership Litig., 854 F. Supp. 64, 92-3 (D. Conn. 1994); In re First Am. Center Sec. Litig., 807 F. Supp. 326 (S.D.N.Y. 1992).
24. There is a reasonable likelihood that the Defendants will engage in future violations unless enjoined.

All tendered Findings and Conclusions not incorporated herein are deemed Denied.

DATED at Albuquerque this 24th day of September, 2003.


BRUCE D. BLACK
United States District Judge

Counsel for Plaintiff:

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